

WHAT IS CLAIMED IS:

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1. A high gloss, disposable paperboard food container with a glossy bilayer finish formed in a heated die set from a paperboard blank,
  - 5        said paperboard blank being prepared from a paperboard substrate provided with a first finish coating layer consisting essentially of a styrene-butadiene resin composition and a second, top coating finish layer consisting essentially of an acrylic resin composition applied to said first finish coating layer, wherein said food container exhibits a surface gloss of at least about 40 gloss units at 60
  - 10        degrees as measured by test method ASTM D523-89.
  2. The high gloss paperboard food container according to Claim 1, wherein said food container exhibits a surface gloss of at least about 50 gloss units at 60
  - 15        degrees as measured by test method ASTM D523-89.
  3. The high gloss paperboard food container according to Claim 1, wherein said food container exhibits a surface gloss of between about 45 gloss units and about 65 gloss units at 60 degrees as measured by test method ASTM D523-89.
  - 20        4. The high gloss paperboard food container according to Claim 1, wherein said styrene-butadiene resin composition and said acrylic resin composition are water-borne compositions.
  - 25        5. The high gloss paperboard food container according to Claim 1, wherein said first finish coating layer is applied to said paperboard substrate in an amount of from about 0.25 pounds to about 1.5 pounds per 3,000 square foot ream.

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cont. → 6 The high gloss paperboard food container according to Claim 5, wherein said first finish coating layer is applied to said paperboard substrate in an amount of at least about 0.5 pounds per 3,000 square foot ream.

5 7. The high gloss paperboard food container according to Claim 6, wherein said first finish coating layer is applied to said paperboard substrate in an amount of from about 0.6 pounds to about 1 pound per 3,000 square foot ream.

10 8. The high gloss paperboard food container according to Claim 1, wherein said second top finish coating layer is applied to said paperboard substrate in an amount of at least about 0.5 pounds per 3,000 square foot ream.

15 9. The high gloss paperboard food container according to Claim 1, wherein said second top finish coating layer is applied to said paperboard substrate in an amount of from about 0.25 pounds to about 1 pound per 3,000 square foot ream.

20 10. The high gloss paperboard food container according to Claim 1, wherein said styrene-butadiene resin composition comprises a carboxylated styrene-butadiene resin.

11. The high gloss paperboard food container according to Claim 1, wherein said paperboard substrate has a basis weight of from about 100 to about 300 pounds per 3,000 square foot ream.

25 12. The high gloss paperboard food container according to Claim 11, wherein said paperboard substrate has a basis weight of from about 125 pounds to about 150 pounds per 3,000 square foot ream.

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13. The high gloss paperboard food container according to Claim 11, wherein said paperboard substrate has a basis weight of from about 150 to about 200 pounds per square foot ream.
- 5 14. The high gloss paperboard food container according to Claim 1, wherein said paperboard substrate is sized with a starch composition in an amount of from about 4 to about 15 pounds per 3,000 square foot ream and provided with a clay coating prior to being coated with said first finish coating layer.
- 10 15. The high gloss paperboard food container according to Claim 14, wherein said paperboard substrate is coated with one or more clay coatings in a coatweight amount of from about 8 lbs of clay coating per 3,000 square foot ream to about 24 lbs of clay coating per 3,000 square foot ream prior to being coated with said first and second finish coating layers.
- 15 16. The high gloss paperboard food container according to Claim 1, wherein the forming surfaces of said heated die set are maintained at a temperature of from about 250° F to about 400° F during pressing of said container.
- 20 17. A method of making a high gloss paperboard food container comprising the steps of:
- 25 a) preparing a coated paperboard substrate said paperboard substrate being provided with a first finish coating layer consisting essentially of a styrene-butadiene resin composition and a second top finish coating layer consisting essentially of an acrylic resin composition applied to said first layer;

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- b) scoring said paperboard substrate in a predetermined pattern suitable for forming said high gloss paperboard food container;
- 5 c) cutting said scored paperboard substrate into a shape appropriate for forming said high gloss paperboard food container;
- d) heat pressing said paperboard blank into said high gloss paperboard food container wherein said container is provided with a plurality of pleats and said food container exhibits a surface gloss of at least about 40 gloss units at 60° as measured by test method ASTM D523-89.
- 10 18. The method according to Claim 17, wherein the forming surfaces of the heated die set are maintained a temperature of between about 250 to about 400 degrees F.
- 15 19. The method according to Claim 18, wherein said first finish coating is applied to said paperboard substrate in an amount of from about 0.25 pounds per 3,000 square foot ream to about 1.5 pounds per 3,000 square foot ream.
- 20 20. The method according to Claim 17, wherein said second top finish coating layer is applied to said paperboard substrate in an amount of from about 0.25 pounds per 3,000 square foot ream to about 1 pound per 3,000 square foot ream.
- 25 *Substa* 21. A coated paperboard for making a high gloss paperboard food container with a glossy bilayer finish wherein said container exhibits a surface gloss of at least about 40 gloss units at 60° as measured by test method ASTM D523-89 said coated paperboard comprising:

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- 5      a) a paperboard substrate sized with from about 4 pounds of starch per 3,000 square foot ream to about 15 pounds of starch per 3,000 square foot ream and provided with a clay coating;
- b) a first finish coating layer consisting essentially of a styrene – butadiene resin composition applied to said clay coating; and
- c) a second finish top coat layer consisting essentially of an acrylic resin composition applied to said first layer.

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22. The coated paperboard according to Claim 21, wherein said paperboard substrate is coated with one or more clay coatings in a coatweight amount of from 8 lbs of clay coating to about 24 lbs of clay coating per 3,000 square foot ream prior to being coated with said first finish coating layer and said second finish top coat layer.

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23. The coated paperboard food container according to Claim 21, wherein said styrene-butadiene resin composition and said acrylic resin composition are water-borne compositions.

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24. The coated paperboard according to Claim 21, wherein said first finish coating layer is applied to said paperboard substrate in an amount of from about 0.25 pounds to about 1.5 pounds per 3,000 square foot ream.

25      25. The coated paperboard according to Claim 24, wherein said first finish coating layer is applied to said paperboard substrate in an amount of at least about 0.5 pounds per 3,000 square foot ream.

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26. The coated paperboard according to Claim 25 wherein said first finish coating layer is applied to said paperboard substrate in an amount of from about 0.6 pounds to about 1 pound per 3,000 square foot ream.
- 5 27. The coated paperboard according to Claim 21, wherein said second top finish coating layer is applied to said paperboard substrate in an amount of at least about 0.5 pounds per 3,000 square foot ream.
- 10 28. The coated paperboard according to Claim 27, wherein said second top finish coating layer is applied to said paperboard substrate in an amount of from about 0.25 pounds to about 1 pound per 3,000 square foot ream.
- 15 29. The coated paperboard according to Claim 29, wherein said styrene-butadiene resin composition comprises a carboxylated styrene-butadiene resin.
- 20 30. A method of improving the wet rigidity of a disposable food container prepared from a paperboard blank in a heated die set, said paperboard blank being starch-sized and provided with a clay coating as well as a finish coating applied thereto and said disposable food container being provided with a plurality of pleats about its periphery; said method comprising providing said paperboard blank with a first finish coating layer consisting essentially of a styrene-butadiene resin composition applied to said clay coating and a second finish coating layer applied to said first finish coating layer consisting essentially of an acrylic resin composition.
- 25 31. The method according to Claim 30, wherein said first coating layer is applied to said paperboard blank in an amount of at least about 0.25 lbs per 3000 square foot ream of paperboard.

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32. The method according to Claim 30, wherein said styrene-butadiene resin composition is a carboxylated styrene-butadiene resin composition.
33. The method according to Claim 30, wherein said paperboard blank is sized with  
5 from about 4 to about 15 lbs of starch per 3000 square feet of paperboard.
34. The method according to Claim 30, wherein the method is further operative to reduce the moisture pickup of said disposable food container.
- 10 35. The method according to Claim 30, wherein the method is further operative to increase the dry rigidity of said disposable food container.

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